



DEPARTMENT OF HEALTH AND HUMAN SERVICES

Office of the Secretary

Findings of Research Misconduct

AGENCY: Office of the Secretary, HHS

ACTION: Notice.

SUMMARY: Findings of research misconduct have been made against Shuo Chen, Ph.D.

(Respondent), formerly a postdoctoral researcher, Department of Physics, University of California, Berkeley (UCB). Respondent engaged in research misconduct in research reported in a grant application submitted for U.S. Public Health Service (PHS) funds, specifically National Institute of Neurological Disorders and Stroke (NINDS), National Institutes of Health (NIH), grant application K99 NS116562-01. The administrative actions, including supervision for a period of one (1) year, were implemented beginning on February 28, 2022, and are detailed below.

FOR FURTHER INFORMATION CONTACT:

Wanda K. Jones, Dr.P.H.
Acting Director
Office of Research Integrity
1101 Wootton Parkway, Suite 240
Rockville, MD 20852
(240) 453-8200

SUPPLEMENTARY INFORMATION: Notice is hereby given that the Office of Research Integrity (ORI) has taken final action in the following case:

Shuo Chen, Ph.D., University of California, Berkeley: Based on the report of an investigation conducted by UCB and additional analysis conducted by ORI in its oversight review, ORI found that Dr. Shuo Chen, formerly a postdoctoral researcher, Department of Physics, UCB, engaged in research misconduct in research reported in a grant application submitted for PHS funds, specifically NINDS, NIH, grant application K99 NS116562-01.

ORI found that Respondent engaged in research misconduct by intentionally, knowingly, and/or recklessly falsifying data and methods by altering, reusing, and relabeling source two-photon microscopy and electrophysiological data to represent images of mouse hippocampal neurons in the following grant application:

- K99 NS116562-01, “Investigation into network dynamics of hippocampal replay sequences by ultrafast voltage imaging,” submitted to NINDS, NIH, on June 25, 2019

ORI found that Respondent intentionally, knowingly, and/or recklessly falsified two-photon microscopy and in vivo electrophysiological activity images, figure legends, and text descriptions of hippocampal neurons from a mouse running on a treadmill in a head-fixed virtual reality (VR) set up. Specifically:

- Respondent reused an image of visual cortex neurons to represent fluorescence calcium imaging of hippocampal neurons in Figure 6d and its associated text and figure legend of K99 NS116562-01

- Respondent reused in vivo electrophysiological data from control mice of spatial receptive fields for all recorded place cells during linear track exploration sessions from Supplemental Figure 1b from *Nat Neurosci.* 2018 Jul;21(7):996-1003 (doi: 10.1038/s41593-018-0163-8) to represent several sessions of two-photon hippocampal calcium imaging of progressive place fields, obtained from multiple mice running on a treadmill in a head-fixed VR set up, in Figure 6e and its associated text and figure legend of K99 NS116562-01

Respondent neither admits nor denies ORI's findings of research misconduct. The parties entered into a Voluntary Settlement Agreement (Agreement) to conclude this matter without further expenditure of time, finances, or other resources. The settlement is not an admission of liability on the part of the Respondent.

Respondent voluntarily agreed to the following:

- (1) Respondent will have his research supervised for a period of one (1) year beginning on February 28, 2022 (the "Supervision Period"). Prior to the submission of an application for PHS support for a research project on which Respondent's participation is proposed and prior to Respondent's participation in any capacity in PHS-supported research, Respondent will submit a plan for supervision of Respondent's duties to ORI for approval. The supervision plan must be designed to ensure the integrity of Respondent's research. Respondent will not participate in any PHS-supported research until such a supervision plan is approved by ORI. Respondent will comply with the agreed-upon supervision plan.
- (2) The requirements for Respondent's supervision plan are as follows:

- i. A committee of 2-3 senior faculty members at the institution who are familiar with Respondent's field of research, but not including Respondent's supervisor or collaborators, will provide oversight and guidance during the Supervision Period. The committee will review primary data from Respondent's laboratory on a quarterly basis and submit a report to ORI at six (6) month intervals setting forth the committee meeting dates and Respondent's compliance with appropriate research standards and confirming the integrity of Respondent's research.
 - ii. The committee will conduct an advance review of each application for PHS funds, or report, manuscript, or abstract involving PHS-supported research in which Respondent is involved. The review will include a discussion with Respondent of the primary data represented in those documents and will include a certification to ORI that the data presented in the proposed application, report, manuscript, or abstract is supported by the research record.
- (3) During the Supervision Period, Respondent will ensure that any institution employing him submits, in conjunction with each application for PHS funds, or report, manuscript, or abstract involving PHS-supported research in which Respondent is involved, a certification to ORI that the data provided by Respondent are based on actual experiments or are otherwise legitimately derived and that the data, procedures, and methodology are accurately reported in the application, report, manuscript, or abstract.
- (4) If no supervision plan is provided to ORI, Respondent will provide certification to ORI at the conclusion of the Supervision Period that his participation was not proposed on a research project for which an application for PHS support was submitted and that he has not participated in any capacity in PHS-supported research.

- (5) During the Supervision Period, Respondent will exclude himself voluntarily from serving in any advisory or consultant capacity to PHS including, but not limited to, service on any PHS advisory committee, board, and/or peer review committee.

Dated: March 14, 2022.

Wanda K. Jones,

Acting Director, Office of Research Integrity,

Office of the Assistant Secretary for Health.

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